

CLAIMS

1. A dialog control device characterized by comprising:
memory means for storing various pieces of information
appendant to an object as values corresponding to respective
items of the object; and
conversation generation means for selecting, in response
to an item of said object defined as topic, another topic
relating to the topic used in the immediately preceding
conversation and generating an acquisition conversation for
acquiring the value of the item selected as topic or a
utilization conversation for utilizing the value of the item
in the topic already stored in said memory means as the next
conversation;
said conversation generation means being adapted to
store the acquired value acquired by said acquisition
conversation as the value of the corresponding item.
2. The device according to claim 1, wherein
said conversation generation means selects any other
item of the same object to which the topic used in said
immediately preceding conversation belongs as the next topic
and generates said utilization conversation by utilizing the
value of the item already stored in said memory means.
3. The device according to claim 1, wherein
said conversation generation means selects an item
relating to the same object to which the topic used in said
immediately preceding conversation belongs as the next topic
and generates said utilization conversation by utilizing the

value of the item already stored in said memory means.

4. The device according to claim 1, wherein

said conversation generation means selects any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of said any of the items already stored in said memory means.

5. The device according to claim 1, wherein

said conversation generation means selects the item of said object same as the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of the item already stored in said memory means.

6. The device according to claim 1, wherein

said conversation generation means selects the same item of another object having a value same as the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of the same item already stored in said memory means.

7. The device according to claim 1, wherein

said conversation generation means selects an item of another object relating to the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the related value already stored in said memory means.

8. The device according to claim 1, wherein

said conversation generation means selects any other item of the same object to which the topic of said immediately preceding conversation belongs as the next topic and generates said acquisition conversation in order to acquire the value of said any other item.

9. The device according to claim 1, wherein

said conversation generation means selects an item relating to the same object to which the topic used in said immediately preceding conversation belongs as the next topic and generates said acquisition conversation in order to acquire the value of the related item.

10. The device according to claim 1, wherein

said conversation generation means selects any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said acquisition conversation in order to acquire the value of said any of the items.

11. The device according to claim 1, wherein

said conversation generation means generates said utilization conversation by utilizing a matter that can be acquired on the basis of the value of the item of said selected topic.

12. The device according to claim 1, wherein

said conversation generation means includes:

memory acquisition conversation generation means for generating said acquisition conversation;

memory utilization conversation generation means for generating said utilization conversation;

situation judgment means for selecting either said memory acquisition conversation generation means or said memory utilization conversation generation means and have said memory acquisition conversation generation means or said memory utilization conversation generation means, whichever selected, generate said next conversation.

13. The device according to claim 12, wherein

said situation judgment means judges to have either said memory acquisition conversation generation means generate said acquisition conversation or said memory utilization conversation generation means generate said utilization conversation on the basis of the first extent that is the ratio of the number of items whose values are not acquired relative to the total number of items of the dialog partner and the second extent that is the ratio of the number of items whose values are acquired relative to the total number of items of said dialog partner.

14. The device according to claim 12, wherein

said situation judgment means has said memory acquisition conversation generation means generate said acquisition conversation when said first extent is greater than said second extent but has said memory utilization conversation generation means generate said utilization conversation when said first extent is smaller than said second extent.

15. The device according to claim 1, wherein

said conversation generation means holds history of the used topics and generates said acquisition conversation or

said utilization conversation by referring to the history.

16. The device according to claim 15, wherein

said conversation generation means generates said acquisition conversation or said utilization conversation so as not to use the same topic in a single dialog with the same dialog partner by referring to the history.

17. The device according to claim 1, wherein

said memory means stores the values of the items of said object along with their respective degrees of impression that provide reference for deciding if any of the values may be used in the conversations with said object or not and

said conversation generation means selects the topic to be used in the next conversation on the basis of the degree of impression thereof.

18. The device according to claim 17, characterized by further comprising:

internal condition management means adapted to hold parameters indicating the internal condition and change the values of the parameters according to external stimuli;

each of said degrees of impression representing the difference of the parameter values of the corresponding parameter held by said internal condition management means before and after the acquisition of the corresponding value.

19. A dialog control method comprising:

a first step of storing various pieces of information appendant to an object as values corresponding to respective items of said object; and

a second step of selecting, in response to an item of

said object defined as topic, another topic relating to the topic used in the immediately preceding conversation and generating an acquisition conversation for acquiring the value of said item selected as topic or a utilization conversation for utilizing the value of the item in the already stored topic as the next conversation;

the acquired value acquired by the acquisition conversation being stored in the second step as the value of said corresponding item.

20. The method according to claim 19, wherein

any other item of the same object to which the topic used in said immediately preceding conversation belongs is selected as the next topic and said utilization conversation is generated by utilizing the value of the item already stored in said memory means in said second step.

21. The method according to claim 19, wherein

an item relating to the same object to which the topic used in said immediately preceding conversation belongs is selected as the next topic and said utilization conversation is generated by utilizing the value of the item already stored in said memory means in said second step.

22. The method according to claim 19, wherein

any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation is selected as the next topic and said utilization conversation is generated by utilizing the value of said any of the items already stored in said memory means in said second step.

23. The method according to claim 19, wherein
the item of said object same as the topic used in said immediately preceding conversation is selected as the next topic and said utilization conversation is generated by utilizing the value of the item already stored in said memory means in said second step.

24. The method according to claim 19, wherein
the same item of another object having a value same as the value of the item of the topic used in said immediately preceding conversation is selected as the next topic and said utilization conversation is generated by utilizing the value of the same item already stored in said memory means in said second step.

25. The method according to claim 19, wherein
an item of another object relating to the value of the item of the topic used in said immediately preceding conversation is selected as the next topic and said utilization conversation is generated by utilizing the related value already stored in said memory means in said second step.

26. The method according to claim 19, wherein
any other item of the same object to which the topic of said immediately preceding conversation belongs is selected as the next topic and said acquisition conversation is generated in order to acquire the value of said any other item in said second step.

27. The method according to claim 19, wherein
an item relating to the same object to which the topic used in said immediately preceding conversation belongs is

selected as the next topic and said acquisition conversation is generated in order to acquire the value of the related item in said second step.

28. The method according to claim 19, wherein

any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation is selected as the next topic and said acquisition conversation is generated in order to acquire the value of said any of the items in said second step.

29. The method according to claim 19, wherein

said utilization conversation is generated by utilizing a matter that can be acquired on the basis of the value of the item of said selected topic in said second step.

30. The method according to claim 19, wherein

it is judged to generate either said acquisition conversation or said utilization conversation on the basis of the first extent that is the ratio of the number of items whose values are not acquired relative to the total number of items of the dialog partner and the second extent that is the ratio of the number of items whose values are acquired relative to the total number of items of said dialog partner in said second step.

31. The method according to claim 30, wherein

said acquisition conversation is generated when said first extent is greater than said second extent but said utilization conversation is generated when said first extent is smaller than said second extent in said second step.

32. The method according to claim 19, wherein

history of the used topics is held and said acquisition conversation or said utilization conversation is generated by referring to the history in said second step.

33. The method according to claim 32, wherein

said acquisition conversation or said utilization conversation is generated so as not to use the same topic in a single dialog with the same dialog partner by referring to the history in said second step.

34. The method according to claim 19, wherein

the values of the items of said object are stored along with their respective degrees of impression that provide reference for deciding if any of the values may be used in the conversations with said object or not in said first step, and

the topic to be used in the next conversation is selected on the basis of the degree of impression thereof in said second step.

35. The method according to claim 34, wherein

parameters indicating the internal condition are held and the values of the parameters are changed according to external stimuli in said first step;

each of said degrees of impression representing the difference of the parameter values of the corresponding parameter held by said internal condition management means before and after the acquisition of the corresponding value.

36. A robot device comprising:

memory means for storing various pieces of information appendant to an object as values corresponding to respective items of the object; and

conversation generation means for selecting, in response to an item of said object defined as topic, another topic relating to the topic used in the immediately preceding conversation and generating an acquisition conversation for acquiring the value of the item selected as topic or a utilization conversation for utilizing the value of the item in the topic already stored in said memory means as the next conversation;

said conversation generation means being adapted to store the acquired value acquired by the acquisition conversation in said memory means as the value of the corresponding item.